

Dramora Nepy Asmara, 2017. Thesis. **The Correlation Of Interleukin-10-1082G/A Genes Polymorfism With Hearing Loss In Pulmonary Multidrugs Resistant-Tuberculosis Patients.** . 1st Supervisor: DR. Dr. Harsini, Sp.P(K), FISR. 2nd Supervisor: DR. Dr. Yusup Subagio Sutanto, Sp.P(K), FISR. 3rd Supervisor: Dr. Hadi Sudrajad, Sp.THT-KL(K), Msi.Med. Master Program in Family Medicine, Postgraduate Program, Sebelas Maret University, Surakarta.

ABSTRACT

THE CORRELATION OF INTERLEUKIN-10-1082G/A GENES POLYMORFISM WITH HEARING LOSS IN PULMONARY MULTIDRUGS RESISTANT-TUBERCULOSIS PATIENTS

Dramora Nepy Asmara

Introduction: Problems of tuberculosis (TB) eradication were increased with the presence of Mycobacterium tuberculosis (MTb) resistance to anti-TB drugs called MDR-TB. Genotype IL-10-1082G/A polymorphisms associated with the secretion of interleukin 10 (IL-10) as an anti-inflammatory cytokine play important role in the pathogenesis of MDR-TB infection. Management of MDR-TB using OAT kanamycin cause the effects of ototoxicity resulting in deafness. The IL-10 protective role of IL-10-1082G/A genotype against deafness due to kanamycin remains controversial.

Methods: Observational studies of cohort retrospective analysis of patients with MDR-TB treated at RSUD Dr. Moewardi Surakarta in 2011-2015.

Results: There were 81 subjects MDR-TB patients with genotype IL-10-1082G/A polymorphism. The proportion of IL-10-1082G/A paired allele genotypes were AA 9.9%, GG 4.9%, and GA 69%. Patients with MDR-TB with kanamycin therapy who experienced deafness were 55.5% with $p=0.899$ did not statistically significant. The degree of right ear audiometry $p=0.375$ whereas the left ear $p=0.416$ shows no significant association with IL-10-1082G/A genotype polymorphism. The mean onset of deafness of the three groups of polymorphisms was 2.51 ± 2.88 months after injection obtaining a statistically insignificant $p=0.758$ with IL-10-1082G/A genotype polymorphism. Polymorphisms in the GA genotype (55.1%) tend to had lower ototoxicity than the AA genotype (62.5%). GA genotype showed protective effect against deafness compared to other genotypes.

Conclusions: There is no correlation between interleukin genotype polymorphism 10-1082G/A with deafness in MDR-TB patients. There is no correlation between interleukin genotype polymorphism 10-1082G/A with onset of deafness in MDR-TB patients.

Keywords: MDR-TB, polymorphism, genotype IL-10-1082G/A, deafness